NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

SARS
Developing a Research Response

A Research Colloquium on Severe Acute Respiratory Syndrome
May 30, 2003
9:00 a.m.–4:30 p.m.
Natcher Conference Center
National Institutes of Health, Bethesda, Maryland

Agenda

Plenary Session

8:30 a.m.	Registration and Coffee	
Session Chair:	Anthony S. Fauci, NIAID	
9:00 a.m.	Welcome— SARS Research in Perspective	Secretary Tommy G. Thompson, DHHS Anthony S. Fauci, NIAID
9:10 a.m.	SARS—Epidemiology	Klaus Stöhr, WHO
9:30 a.m.	SARS—Etiology	Malik Peiris, University of Hong Kong
9:50 a.m.	SARS—Clinical Experience	Allison McGeer, Mt. Sinai Hospital and University of Toronto
10:10 a.m.	Discussion	
10:30 a.m.	Break	
Session Chair:	John R. La Montagne, NIAID	
11:00 a.m.	Coronavirus Biology Session • Basic Virology and Pathogenesis • Molecular Biology and Genetics	Kathryn Holmes, University of Colorado Health Sciences Center Mark Denison, Vanderbilt University
11:45 p.m.	Discussion	
12 noon	Lunch	

SARS Agenda (Continued)

Concurrent Breakout Sessions

1:00 p.m.

1. **Vaccine Development** (E1/E2)

Opening Presentation:
Ralph Baric, University of North Carolina, Chapel Hill
Karen Midthun, CBER/FDA

Co-Chairs:
Robert Couch, Baylor College of Medicine
Bart Haynes, Duke University

Questions for Discussion:

- What scientific and technical barriers must be overcome to develop a safe and efficacious SARS vaccine?
  - How useful is the experience with existing animal coronavirus vaccines?
- What scientific approaches should be pursued in the short term and in the long term?
  - Inactivated, killed?
  - Live attenuated?
  - Vectored?
  - Purified protein antigen?
  - Others
- Are the existing scientific and technical resources adequate to achieve this objective?
  - Animal models?
  - Scientific networks?

2. **Antiviral Development** (Balcony A)

Opening Presentation:
John Huggins, USAMRIID
Mark Goldberger, CDER/FDA

Co-Chairs:
Ray Dolin, Harvard University
Marty Hirsch, Harvard University

Questions for Discussion:

- What scientific and technical barriers must be overcome to develop safe and efficacious SARS antiviral drugs?
  - How can interactions with the private sector be promoted?
- What scientific approaches should be pursued in the short term and in the long term?
  - High-throughput screening?
  - Targeted, rational development?
  - Immunotherapeutic approaches?
- Are the existing scientific and technical resources adequate to achieve this objective?
  - Which animal models are most likely to be useful?
  - Scientific networks?

SARS Agenda (Continued)

3. **Clinical Research** (Balcony C)
   Opening Presentation:
   TBA

   Co-Chairs:
   Henry Masur, NIH
   Cliff Lane, NIAID

   Questions for Discussion:
   - What is the current description of spectrum of clinical disease?
   - What scientific and technical information is needed to develop optimal approaches for the management of patients with SARS?
     - Acute-phase illness versus the complications?
   - The timing of the development of the respiratory distress syndrome suggests that immunopathogenic factors may be involved? What should be done to address this issue?
   - Is there a role for collaborative clinical trials to gain information of use to mitigate the impact of future outbreaks?
     - For antivirals?
     - Immunotherapies?
     - Vaccines?
   - Are the existing scientific and technical resources adequate to achieve this objective?

4. **Epidemiology** (F1/F2)
   Opening Presentation:
   Larry Anderson, CDC
   Y. Guan, University of Hong Kong

   Co-Chairs:
   Jim Hughes, CDC
   Robert Webster, St. Jude Children's Research Hospital

   Questions for Discussion:
   - What are the technical and scientific issues in the epidemiology of SARS?
     - Does the SARS virus have an animal reservoir?
     - Asymptomatic infection? Chronic infection? Patterns and length of viral shedding?
     - Is there variability in symptoms and outcome? Relapses?
     - Routes of infection? Seasonal variability?
   - What do we need to know about the natural history of SARS?
     - Are there "superspreaders"? What are the implications for control?
     - What is the role of co-infection in the pathogenesis and epidemiology of SARS?
     - Long-lasting immunity versus reinfection?
     - Disease in children? Other infections (i.e., HIV/AIDS)?
   - Is the infrastructure for research adequate to study these questions?
   - What is the role of collaboration in understanding the epidemiology of SARS?

SARS Agenda (Continued)

5. **Diagnostics** (Balcony B)
   Opening Presentation:
   William Bellini, CDC

   Co-Chairs:
   Jim LeDuc, CDC
   Malik Peiris, University of Hong Kong

   Questions for Discussion:
   - What are the scientific and technical barriers to the development of diagnostic tests for SARS? What can be done to address these issues?
     - Availability of reagents?
     - Exchange of specimens?
     - Development of common protocols for sampling and assay?
   - What is the role of collaborative research efforts or networks in addressing this problem?
   - What must be done to develop a diagnostic test that can be used in the field?
   - What must be done to engage the private sector in this effort?

3:00 p.m. Break

Plenary Session

Session Chair: John R. La Montagne, NIAID

3:30 p.m. Wrap-up — Breakout Session Co-Chairs

4:30 p.m. Adjournment

Comments are welcome. Please send comments to SARSmeeting@niaid.nih.gov